

1. (Currently Amended) A polymer matrix incorporating catalase co-immobilized with an analytic enzyme which generates hydrogen peroxide wherein the concentration of the catalase in the pregel solution of the polymer matrix ranges from about 100 units/mL to about 1000 units/mL.
3. (Currently Amended) The polymer matrix of claim 1, which ~~has a crosslinking proportion~~ consists of between about 0.5 mol % and about 6 mol % cross-linking monomers.
4. (Original) The polymer matrix of claim 1, which when hydrated has a thickness ranging from about 0.1 mm to about 3.0 mm.
5. (Original) The polymer matrix of claim 1, wherein the analytic enzyme is glucose oxidase.
6. (Original) The polymer matrix of claim 1, wherein the matrix is composed of hydroxypropyl methacrylate, N,N-dimethylaminoethyl methacrylate, and tetraethyleneglycol dimethacrylate.
7. (Original) A biosensor or analyte-responsive drug delivery device which contains a polymer matrix and an analytic enzyme that generates hydrogen peroxide, wherein the analytic enzyme is co-immobilized in the biosensor or drug delivery device with catalase at a concentration ranging from about 100 units/ml to about 900 units/ml.
8. (Original) The biosensor or drug delivery device of claim 7, wherein the matrix is pH-sensitive.
9. (Original) The biosensor or drug delivery device of claim 7, wherein the matrix is not pH-sensitive.
10. (Original) The biosensor or drug delivery device of claim 7, which has a crosslinking proportion of between about 0.5 mol % and about 6 mol %.
11. (Original) The biosensor or drug delivery device of claim 7, which when hydrated

has a thickness ranging from about 0.1 mm to about 3.0 mm.

12. (Original) The biosensor or drug delivery device of claim 7, wherein the analytic enzyme is glucose oxidase.

13. (Original) The biosensor or drug delivery device of claim 7, wherein the analyte is detected by means of a pressure sensor.

14. (Original) The biosensor or drug delivery device of claim 7, wherein the analyte is detected by amperometric means.

15. (Currently Amended) A method of making a polymer matrix for use in a biosensor or analyte-responsive drug delivery device containing an analytic enzyme that generates hydrogen peroxide, ~~including a step of co-immobilizing the analytic enzyme with catalase at a concentration ranging from about 100 units/mL to about 1000 units/mL comprising:~~

means for making a hydrogel from a pregel solution with an added analytic enzyme and catalase where the catalase is added at a concentration ranging from about 100 units of catalase/mL pregel solution to about 1000 units catalase/mL pregel solution of catalase per; and
_____ polymerizing the pregel solution to co-immobilize the analytic enzyme with the catalase.

16. (Currently Amended) The method of claim ~~16~~ 15, wherein the polymer matrix is ~~formulated to have a crosslinking proportion~~ has between about 0.5 mol % and about 6 mol % cross-linking monomers.

17. (Original) The method of claim 16, wherein the polymer matrix is formed to have a thickness when hydrated of between about 0.1 mm and about 3.0 mm.

18. (Original) The method of claim 16, wherein the analytic enzyme is glucose oxidase.

19. (Cancelled)

20. (Cancelled)

21. (Previously Added) The polymer matrix of Claim 1 in combination with a biosensor in which the polymer matrix is contained, the biosensor including means to monitor and detect changes in the polymer matrix.

22. (Previously Added) The polymer matrix-biosensor combination of Claim 21, wherein the biosensor is an analyte-responsive drug delivery device, wherein the polymer matrix changes in response to an analyte condition, and wherein the changes in the polymer matrix control the drug delivery from the device.